UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 9, 2010 (June 8, 2010)

GTx, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**000-50549**	**62-1715807**
(State or other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

175 Toyota Plaza 7th Floor Memphis, Tennessee	**38103**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: **(901) 523-9700**

(Former name or former address if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 8.01 Other Events.

On June 8, 2010, GTx, Inc. issued a press release announcing that in the Phase III clinical trial evaluating toremifene 80 mg for the reduction of fractures and treatment of other estrogen deficiency side effects in men with prostate cancer on androgen deprivation therapy (ADT), toremifene treatment demonstrated an improved benefit/risk ratio in men less than 80 years of age. A copy of the press release is furnished as Exhibit 99.1 to this Current Report.

ITEM 9.01 Financial Statements and Exhibits.

(c) Exhibits

Exhibit Number	Description
99.1	Press Release issued by GTx, Inc. dated June 8, 2010

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

GTx, Inc.

Date: June 9, 2010

By: */s/* Mark E. Mosteller
Name: Mark E. Mosteller
Title: Vice President, Chief Financial Officer

Contact:
McDavid Stilwell
Director, Corporate Communications & Financial Analysis
GTx, Inc.
901-523-9700

GTx Announces Toremifene 80 mg Treatment Demonstrated Improved Fracture Reduction and Safety Profile in Men With Prostate Cancer on ADT Younger Than Age 80

Chicago, June 8, 2010 – GTx, Inc. (Nasdaq: GTXI) announced today that in the Phase III clinical trial evaluating toremifene 80 mg for the reduction of fractures and treatment of other estrogen deficiency side effects in men with prostate cancer on androgen deprivation therapy (ADT), toremifene treatment demonstrated an improved benefit/risk ratio in men less than 80 years of age. The data were presented yesterday at the 2010 Annual Meeting of the American Society of Clinical Oncology in Chicago.

“Data from the TREAT 1 clinical trial clearly show that toremifene treatment had a more pronounced fracture reduction and better safety profile in men less than age 80,” said Mitchell S. Steiner, MD, CEO of GTx. “Based on these results, we designed the TREAT 2 Phase III clinical trial which will enroll men with prostate cancer on ADT with measured bone loss who are younger than 80 years. We expect this next study to confirm the robust fracture reduction which toremifene 80 mg demonstrated in the first Phase III clinical trial, the TREAT 1 study.”

Study results:
Among all subjects enrolled in the study who had at least one dose of study drug and one on-study DEXA scan, toremifene 80 mg treatment compared to placebo resulted in a greater than 50% reduction in new morphometric vertebral fractures, the primary endpoint of the clinical trial ($p<0.05$).

Among patients younger than age 80 at enrollment (n=847), toremifene 80 mg treatment compared to placebo demonstrated a 79.5% reduction in the incidence of new vertebral fractures ($CI_{0.95}$: 29.8%-94.0%; $p<0.005$). The absolute reduction in this population was 3.8% (4.8% placebo, 1.0% toremifene). Toremifene 80 mg significantly increased BMD at all sites measured ($p<0.001$ for all comparisons). There was a concomitant decrease in markers of bone turnover ($p<0.001$ for all comparisons). Venous thromboembolic events occurred in 2.1% of the toremifene patients compared to 1.0% of the placebo patients ($p=0.26$), a lower risk than was observed in the overall study population. Other adverse events were similar between groups.

About GTx
GTx, Inc., headquartered in Memphis, Tenn., is a biopharmaceutical company dedicated to the discovery, development, and commercialization of small molecules that selectively target hormone pathways for the treatment and prevention of cancer, the treatment of side effects of anticancer therapy, cancer supportive care, and other serious medical conditions.

GTx is developing toremifene 80 mg for the reduction of fractures and treatment of other estrogen deficiency side effects of androgen deprivation therapy for prostate cancer. GTx has completed a successful toremifene 80 mg Phase III clinical trial and expects to initiate TREAT 2, the second Phase III clinical trial by year end 2010

GTx is also developing Ostarine™ (GTx-024) and other selective androgen receptor modulators, or SARMs, for cancer cachexia and other muscle wasting diseases. GTx is meeting with the FDA this summer to discuss the late stage clinical development plan for Ostarine for cancer cachexia.

GTx's newest product candidate is GTx-758, an oral LH inhibitor, which is in a Phase II clinical trial. GTx-758 has the potential to achieve medical castration without causing bone loss, hot flashes, impotence and other serious side effects of currently available androgen deprivation therapy for prostate cancer. GTx expects to receive results of the Phase II clinical trial this summer.

Forward-Looking Information is Subject to Risk and Uncertainty

This press release contains forward-looking statements based upon GTx's current expectations. Forward-looking statements include, but are not limited to, statements relating to GTx's plans to continue to pursue the development of and marketing approval for, and the potential commercialization of, toremifene 80 mg, and the continued development and potential commercialization of GTx's other product candidates. Forward-looking statements involve risks and uncertainties. GTx's actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, the risks (i) that GTx and its collaboration partner will not be able to commercialize their product candidates if clinical trials do not demonstrate safety and efficacy in humans, including in any additional clinical trials that GTx may conduct for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT; (ii) that GTx may not be able to obtain required regulatory approvals to commercialize its product candidates, including toremifene 80 mg to reduce fractures in men with prostate cancer on ADT, in a timely manner or at all; (iii) that clinical trials being conducted or planned to be conducted by GTx and its collaboration partner may not be initiated or completed on schedule, or at all, or may otherwise be suspended or terminated; (iv) related to GTx's dependence on its collaboration partner for product candidate development and commercialization efforts; (v) related to GTx's reliance on third parties to manufacture its product candidates and to conduct its clinical trials; and (vi) that GTx could utilize its available cash resources sooner than it currently expects and may be unable to raise capital when needed, which would force GTx to delay, reduce or eliminate its product candidate development programs or commercialization efforts. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this press release. GTx's annual report on Form 10-Q filed with the SEC on May 4, 2010 contains under the heading, "Risk Factors," a more comprehensive description of these and other risks to which GTx is subject. GTx expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.